



INDIAN SCHOOL DARSAIT
DEPARTMENT OF MATHEMATICS
WORKSHEET # 4



Subject : MATHEMATICS	Topic : POLYNOMIALS	Date of Worksheet : 04/05/2017
Resource Person: Mrs.Indu .P	Date of submission : 11/05/2017	
Name of the Student _____	Class & Division: _____	Roll Number : _____

HOT QUESTIONS		
1.	If α and β are the zeros of the polynomial $f(x) = ax^2 + bx + c$, then find i) $\alpha^3 + \beta^3$ ii) $\frac{\alpha^2}{\beta} + \frac{\beta^2}{\alpha}$ iii) $1 + \frac{1}{\alpha} + \frac{1}{\beta}$	4
2.	If sum of the squares of zeros of the quadratic polynomial $f(x) = x^2 - 8x + k$ is 40, find the value of k.	3
3.	If the polynomial $6x^4 + 8x^3 + 17x^2 + 21x + 7$ is divided by another polynomial $3x^2 + 4x + 1$, the remainder comes out to be $ax + b$, find a and b.	4
4.	If the polynomial $f(x) = x^4 - 6x^3 + 16x^2 - 25x + 10$ is divided by another polynomial $x^2 - 2x + k$, the remainder comes out to be $x + a$, find k and a	4
5.	If α and β are the zeros of the polynomial $f(x) = x^2 - 5x + k$, such that $\alpha - \beta = 1$, find the value of k.	3
6.	If α and β are the zeros of the polynomial $f(x) = x^2 - x - 2$, then find a polynomial whose zeros are $2\alpha + 1$ and $2\beta + 1$.	3
7.	If $f(x) = x^3 + x^2 - ax + b$ is divisible by $x^2 - x$, find the values of a and b.	3
8.	If α and β are the zeros of the polynomial $f(x) = x^2 - p(x+1) - c$, then find $(\alpha + 1)(\beta + 1)$	2
9.	Find all the zeros of the polynomial $x^4 - 4x^3 - 2x^2 + 12x - 3$, if two of its zeros are $2 \pm \sqrt{3}$.	4
10.	Find the value of k for which $x^4 + 10x^3 + 25x^2 + 15x + k$ is exactly divisible by $x + 7$	3